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2018-04547

## Activity 03 Documentation

### Building the Dockerfile

```
C: > Users > scarl > OneDrive - University of the Philippines > Desktop > 3rd year - 2nd sem > CoE 197 > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Ange Cidro"
3
4 RUN apt-get update
5
6 RUN apt-get install -y iputils-ping
```

  

```
C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>docker build -t "angecidro/ping" .
[+] Building 1.4s (7/7) FINISHED
=> [internal] load build definition from Dockerfile 1.4s
=> => transferring dockerfile: 142B 1.2s
=> [internal] load .dockerignore 1.4s
=> => transferring context: 2B 0.5s
=> [internal] load metadata for docker.io/library/ubuntu:16.04 0.0s
=> [1/3] FROM docker.io/library/ubuntu:16.04 0.0s
=> CACHED [2/3] RUN apt-get update 0.0s
=> CACHED [3/3] RUN apt-get install -y iputils-ping 0.0s
=> exporting to image 0.6s
=> => exporting layers 0.0s
=> => writing image sha256:cdc3569228d1345ec1eb9e82df34a7c5a748588778e0f075d13375814d77b4 0.0s
=> => naming to docker.io/angecidro/ping 0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>_
```

  

angecidro/ping	latest	cdc3569228	7 hours ago	170MB
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## Optimizing the Dockerfile

```
C: > Users > scarl > OneDrive - University of the Philippines > Desktop > 3rd year - 2nd sem > CoE 197 > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Ange Cidro"
3
4 RUN apt-get update
5
6 RUN apt-get install -y iputils-ping
7
8 RUN apt-get clean \
9     && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
10    && truncate -s 0 /var/log/*log
```

```
C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Dock[+] Building 0.7s (8/8) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 276B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:16.04 0.0s
=> [1/4] FROM docker.io/library/ubuntu:16.04 0.0s
=> CACHED [2/4] RUN apt-get update 0.0s
=> CACHED [3/4] RUN apt-get install -y iputils-ping 0.0s
=> [4/4] RUN apt-get clean && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* && truncate 0.6s
=> exporting to image 0.1s
=> => exporting layers 0.0s
=> => writing image sha256:a185fe94c65c14a04566beb59f245025cddd1b48ac2e7d60dfd5494308ffd77b 0.0s
=> => naming to docker.io/angecidro/ping 0.0s
```

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

```
C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>docker images
REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
angecidro/ping      latest      a185fe94c65c  4 seconds ago  170MB
```

...still no improvement

```
C: > Users > scarl > OneDrive - University of the Philippines > Desktop > 3rd year - 2nd sem > CoE 197 > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1 FROM ubuntu:16.04
2 LABEL author="Ange Cidro"
3
4 RUN apt-get update \
5     && apt-get install -y iputils-ping \
6     && apt-get clean \
7     && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
8     && truncate -s 0 /var/log/*log
```

```
C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>docker build -t "angecidro/ping" .
[+] Building 0.2s (6/6) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 282B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                  0.0s
=> [internal] load metadata for docker.io/library/ubuntu:16.04                  0.0s
=> [1/2] FROM docker.io/library/ubuntu:16.04                                    0.0s
=> CACHED [2/2] RUN apt-get update      && apt-get install -y iputils-ping      && apt-get clean      && cd /var/lib/apt/1 0.0s
=> exporting to image                                                            0.0s
=> => exporting layers                                                            0.0s
=> => writing image sha256:bd5772e2100069944713ae802548563cabff0acc042dbb5976a759320f27691e 0.0s
=> => naming to docker.io/angecidro/ping                                         0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
angecidro/ping      1.0             bd5772e21000   7 hours ago    139MB
angecidro/ping      latest          bd5772e21000   7 hours ago    139MB
<none>              <none>          cdc3569228     7 hours ago    170MB
ubuntu              16.04           9ff95a467e45   3 weeks ago    135MB
```

Improved image!

```
Dockerfile X  Release Notes: 1.57.0
C: > Users > scarl > OneDrive - University of the Philippines > Desktop > 3rd year - 2nd sem > CoE 197 > ME8_Containerization_and_Docker > 3-building_images > Dockerfile
1  FROM ubuntu:16.04
2  LABEL author="Ange Cidro"
3
4  ENV PING_TARGET "google.com"
5
6  RUN apt-get update \
7      && apt-get install -y iputils-ping \
8      && apt-get clean \
9      && cd /var/lib/apt/lists && rm -fr *Release* *Sources* *Packages* \
10     && truncate -s 0 /var/log/*log
11
12  CMD ["sh", "-c", "ping $PING_TARGET"]
```

```
C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>docker build -t "angecidro/ping" .
[+] Building 0.2s (6/6) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 355B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                  0.0s
=> [internal] load metadata for docker.io/library/ubuntu:16.04                  0.0s
=> [1/2] FROM docker.io/library/ubuntu:16.04                                    0.0s
=> CACHED [2/2] RUN apt-get update      && apt-get install -y iputils-ping      && apt-get clean      && cd /var/lib/apt/1 0.0s
=> exporting to image                                                            0.0s
=> => exporting layers                                                            0.0s
=> => writing image sha256:87bb4e66c1a45df20fbb70bdc2cc4f5a1568ac10913dbb44384699bb353fd1f3 0.0s
=> => naming to docker.io/angecidro/ping                                         0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\scarl\OneDrive - University of the Philippines\Desktop\3rd year - 2nd sem\CoE 197\ME8_Containerization_and_Docker\3-building_images>docker run -it angecidro/ping
PING google.com (142.250.196.110) 56(84) bytes of data:
64 bytes from 142.250.196.110: icmp_seq=1 ttl=37 time=99.7 ms
64 bytes from 142.250.196.110: icmp_seq=2 ttl=37 time=75.7 ms
64 bytes from 142.250.196.110: icmp_seq=3 ttl=37 time=73.2 ms
64 bytes from 142.250.196.110: icmp_seq=4 ttl=37 time=69.8 ms
^C
--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3003ms
rtt min/avg/max/mdev = 69.812/79.612/99.713/11.793 ms
```

